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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,782	12/12/2001	Stephen Memory	665.00947	9531

7590

05/06/2003

WOOD, PHILLIPS, VAN SANTEN, CLARK & MORTIMER
SUITE 3800
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CHICAGO, IL 60661

EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 05/06/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,782

Applicant(s)

MEMORY ET AL. 

Examiner

Tho v Duong

Art Unit

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2-7,9-12 and 14-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8,13 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Claims 2-7,9-12 and 14-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species of figure 3, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 6.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the claimed subject matter of “hydraulic series” is not mentioned in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed subject matter of “being connected in hydraulic series” renders the scope of the claim indefinite since it is not clear how the tube runs being connected to be in ‘hydraulic series’.

Claim 8 is further rejected as can be understood by the examiner. The examiner assumes that the “being connected in hydraulic series” as the tube runs being in fluid communication.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Martins et al. (US 6,502,305). Martin discloses (figure 1) a heat exchanger module having a front and a back; a plurality of spaced rows of flattened tubes (5,10) from front to back and defining aligned tube runs in each row which are in fluid communication at the manifolds (6 and 12); fins (30) abutted to adjacent tube runs in each row and extending from front to back so that each fin is common to each of the rows and slits (22) extending completely through the fin at a location in the space between the tube run. Martin further discloses (column 4, lines 5-15) that the slits (22) are formed without removal of any fin material. As regarding the claimed limitation of “by the absence of the removal of any material of which the fin is made at the slit”, the method of forming the device “the absence of the removal of any material” is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3743

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldorf (US 4,688,394) in view of Martins (US 6,502,305). Waldorf discloses (figures 1, 2 and column 3, line 25- column 4, line 8) a motor vehicle air conditioner including a heat pump system (36) wherein the heat pump system having a compressor (11) for compressing a refrigerant; an evaporator (13) connected to an inlet of the compressor, a gas cooler (15,26) for receiving compressed refrigerant from the compressor in a cooling mode. Waldorf further discloses (figure 2, dashed lines) that in a heating mode, the gas cooler is an evaporator and the evaporator is the gas cooler. Waldorf does not disclose the details of the gas cooler (15,26). Martin discloses (column 1, lines 31-37) a compact gas cooler, which is used in a motor vehicle air conditioning system. Martin further discloses (figures 1 and 5) a compact gas cooler including a heat exchanger module (1,2) having a front and a back; a plurality of spaced rows of flattened tubes (5,10) from front to back and defining aligned tube runs in each row; fins (30) abutted to adjacent tube runs in each row and extending from front to back so that each fin is common to each of the rows and slits (22) extending completely through the fin at a location in the space between the tube run. Martin further discloses (column 4, lines 5-15) that the slits (22) are formed without removal of any fin material. The motivation to combine the Waldorf and Martin is clearly stated in column 1, lines 37-42 that a gas cooler with common fins such as common fins (30) would simplify the manufacture and make the gas cooler more compact. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Martin's gas cooler in Waldorf to simplify the manufacture and make the gas cooler

Art Unit: 3743

more compact. As regarding the claimed limitation of “ by the absence of the removal of any material of which the fin is made at the slit”, the method of forming the device “the absence of the removal of any material” is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hoshino et al. (US 5,531,268) discloses a heat exchanger that has twisted tubes and fins inserted on two adjacent tube runs.

Kadle et al. (US 5,146,767) discloses a condenser which is used in a refrigerating cycle.

Sugimoto et al. (US 6,357,518) discloses a corrugated fin for a heat exchanger that has a plurality of tube rows.

Yamanaka et al. (US 6,000,460) discloses a heat exchanger for vehicle.

Ueda (US 6,079,218) discloses an air conditioner for vehicle.

Shinmura (US 5,086,835) discloses a heat exchanger that has a common fin.

Whitehead et al. (US 5,036,909) discloses multiple serpentine tube heat exchanger.

Tategami et al. (US 5,033,540) discloses a consolidated duplex heat exchanger.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

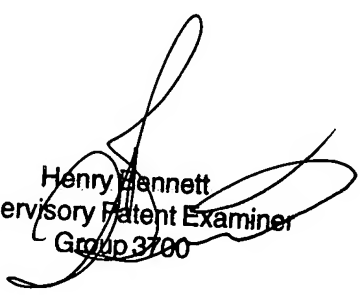
Art Unit: 3743

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7764.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.

Tho Duong

April 29, 2003


Henry Bennett
Supervisory Patent Examiner
Group 3700